

Fig. 1

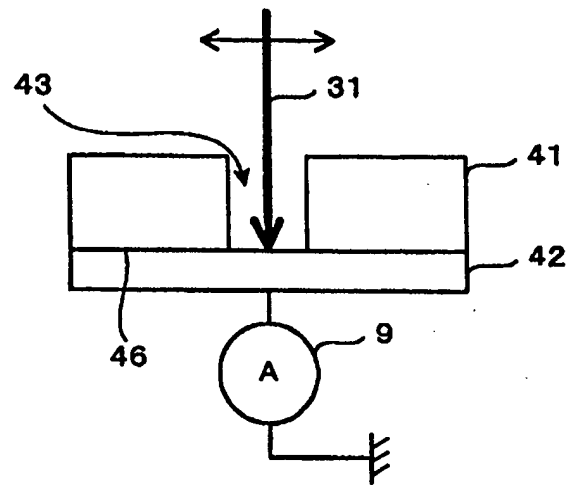


Fig. 2A

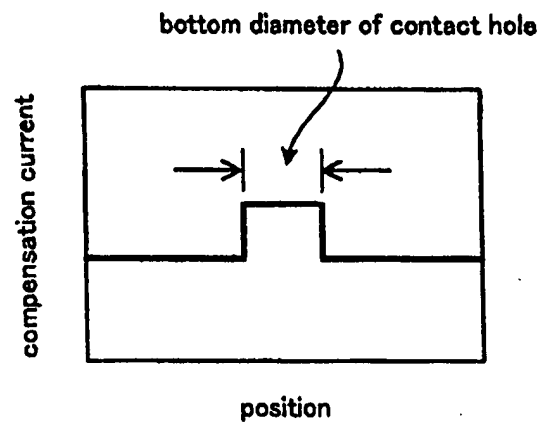


Fig. 2B

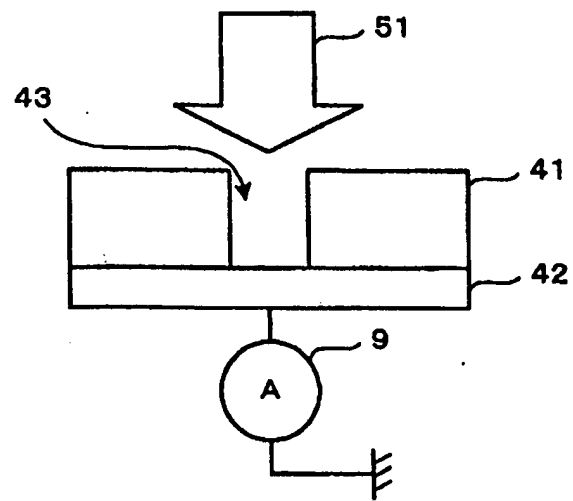


Fig. 3A

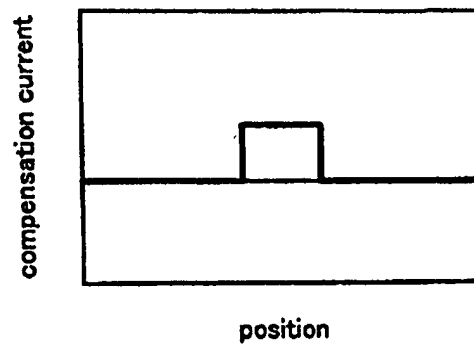


Fig. 3B

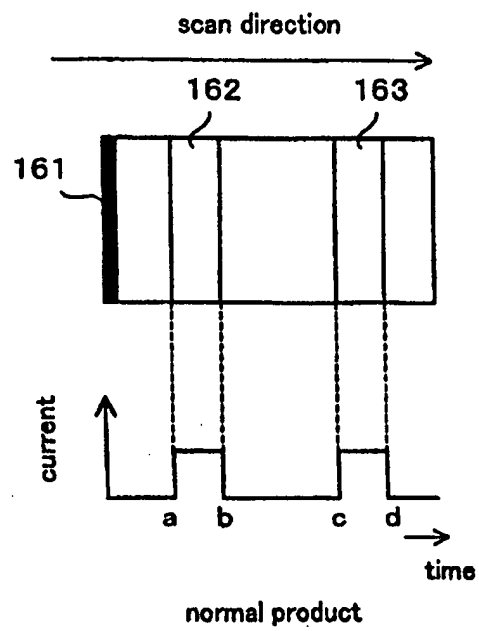


Fig. 4A

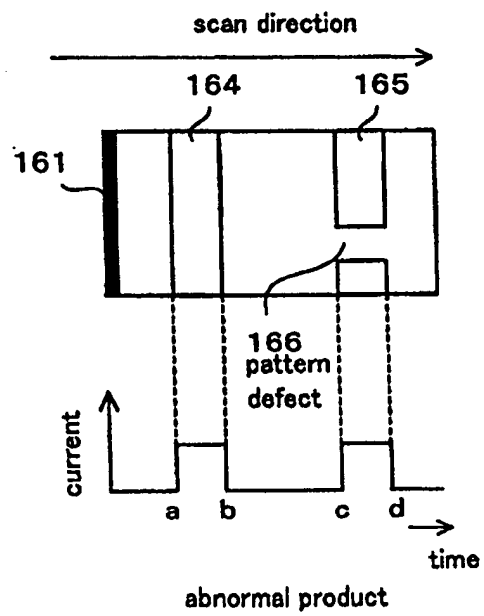


Fig. 4B

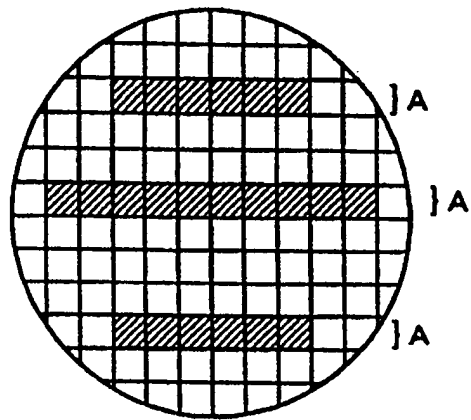


Fig. 5

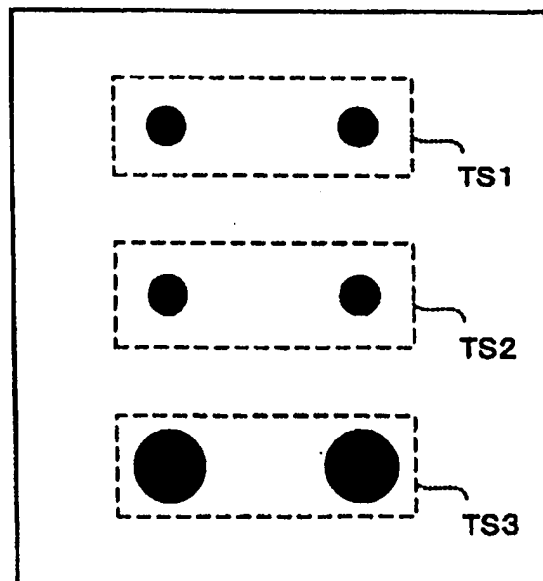


Fig. 6

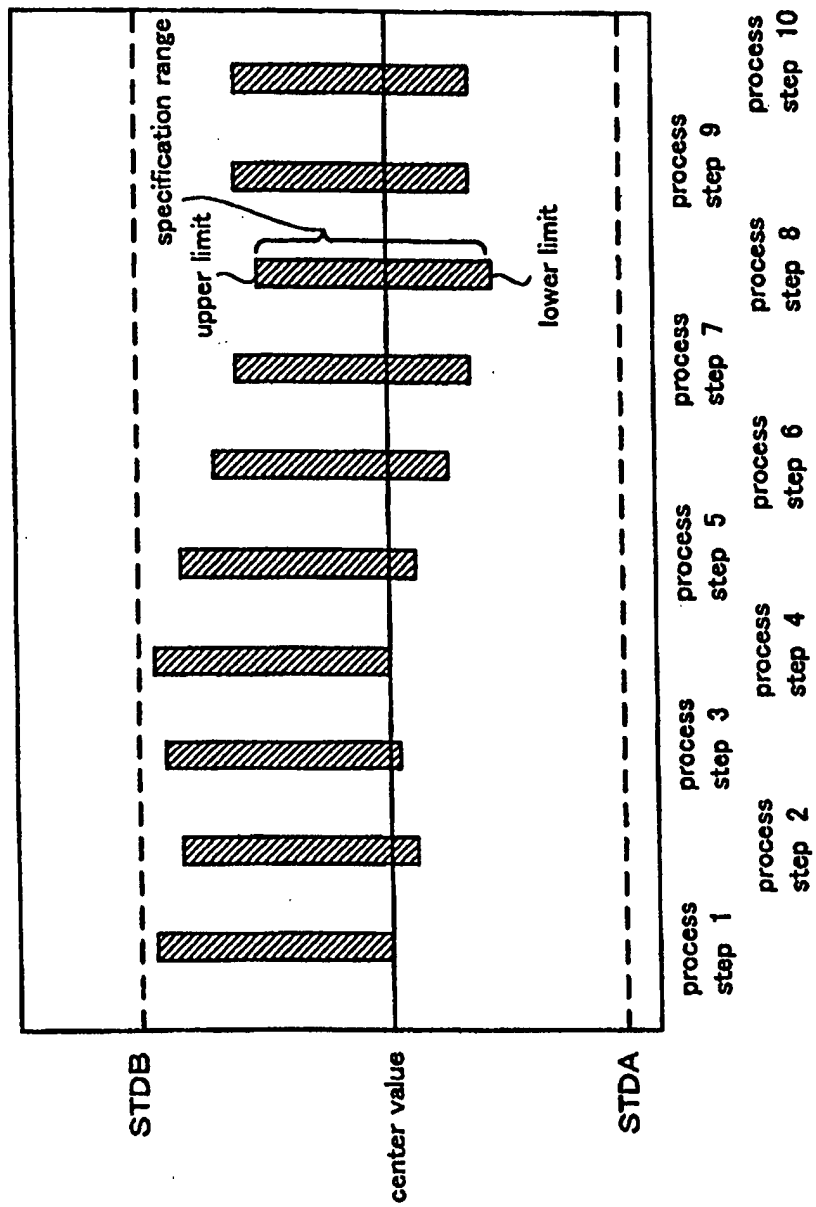


Fig. 7

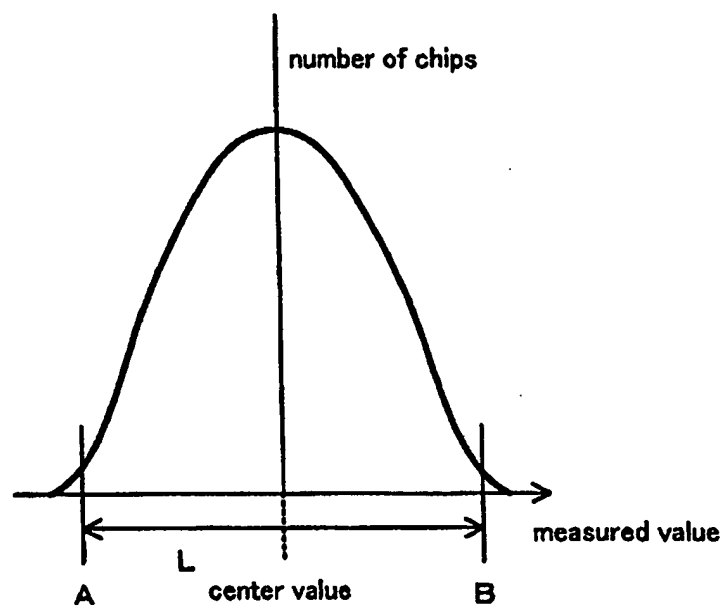


Fig. 8

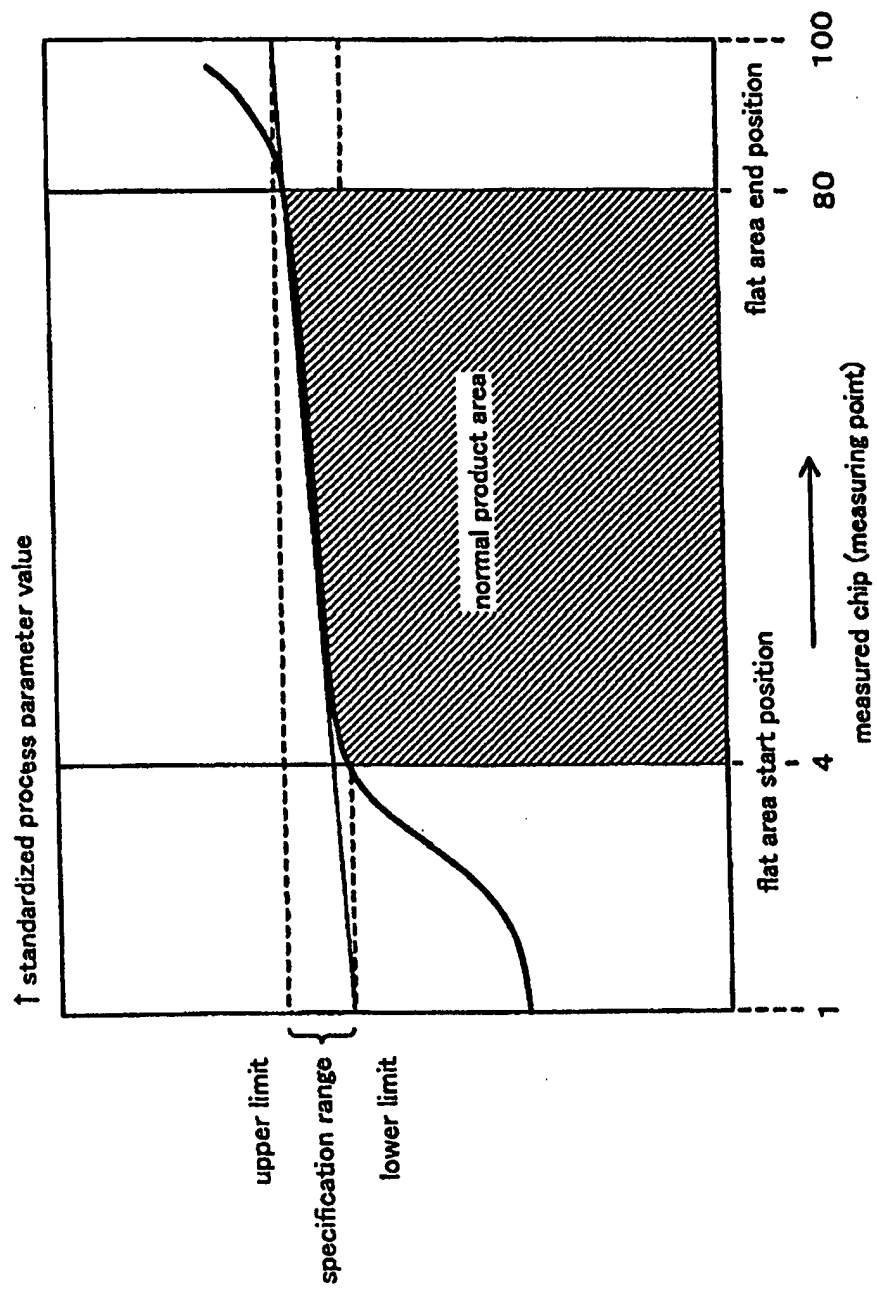


Fig. 9

| process step No. | process step 1a | process step 1b | |
|--------------------------|---------------------------|----------------------------|--|
| upper limit | $2 \mu\text{m}^2(0.YY)$ | $12.6 \mu\text{m}^2(0.VV)$ | |
| lower limit | $1.5 \mu\text{m}^2(0.XX)$ | $0.7 \mu\text{m}^2(0.ZZ)$ | |
| flat area start position | 4 | 5 | |
| flat area end position | 80 | 40 | |

Fig. 10

| production line number | design rule |
|------------------------|---------------------------|
| line 1 | $0.1-0.13 \mu\text{m}$ |
| line 2 | $0.13-0.15 \mu\text{m}$ |
| line 3 | $0.15-0.18 \mu\text{m}$ |
| line 4 | $0.18-0.25 \mu\text{m}$ |
| line 5 | $0.25-0.35 \mu\text{m}$ |
| line 6 | $0.5 \mu\text{m}$ or more |

Fig. 11

- | |
|---|
| 1 fast delivery priority 2 delivery number priority 3 total cost priority 4 quality priority |
|---|

Fig. 12

| | | order form | | | | process step 1a | | | process step 1b | | |
|-----------|--------------|------------|------------------------|-----------|------------------|--------------------|-----------------|------------------|--------------------|-----------------|--|
| user name | product name | lot number | production method | line name | prearranged date | date of completion | estimated yield | prearranged date | date of completion | estimated yield | |
| CCC1 | alpha | x x | fast delivery priority | Line 1 | 10/8 | 10/9 | 90(%) | 10/10 | 10/10 | 80(%) | |

Fig. 13

| user ID = 10000 | | product name = alpha | | 200/11/20 | |
|---------------------------------------|-----------------|----------------------|-----------------------|--------------------------|-----------------|
| date of calculation | 10/10 | 10/20 | 11/10 | 11/20 | 11/22 |
| current process step | input date | Contact (1a, 1b) | thin film (2a, 2b) | wiring | wiring |
| prearranged date of completion | 12/24 | 12/24 | 12/24 | 12/24 | 12/24 |
| predicted delivery number of products | 100 | 90 | 90 | 50 | 80 |
| unit cost of chip | 1,000,000 yen | 1,100,000 yen | 1,100,000 yen | 2,000,000 yen | 1,380,000 yen |
| total cost | 100,000,000 yen | 100,000,000 yen | 100,000,000 yen | 100,000,000 yen | 110,000,000 yen |
| remarks | | | | 100% re-working selected | 100% re-working |

Fig. 14

| production method (lot number) | mixing ratio(%) |
|---|-----------------|
| production method 1 (XXA) | 60 |
| production method 2 (XXB) | 20 |
| production method 3 (XXC) | 20 |
| forwarding date = December 24 predicted number of normal products=70 predicted cost of chip=1,000,000 yen | |

wafer input portfolio

Fig. 15

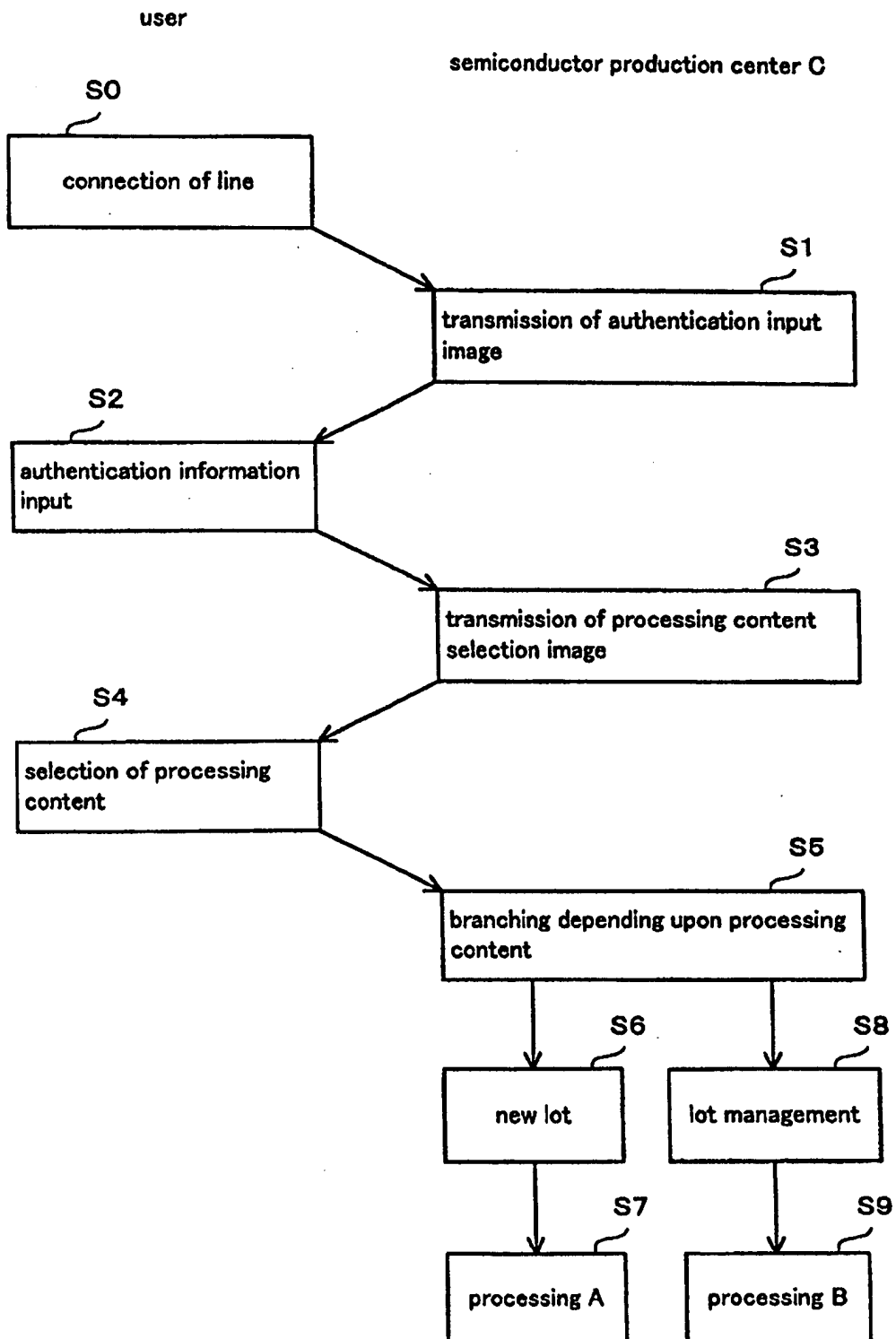


Fig. 16

semiconductor production center C

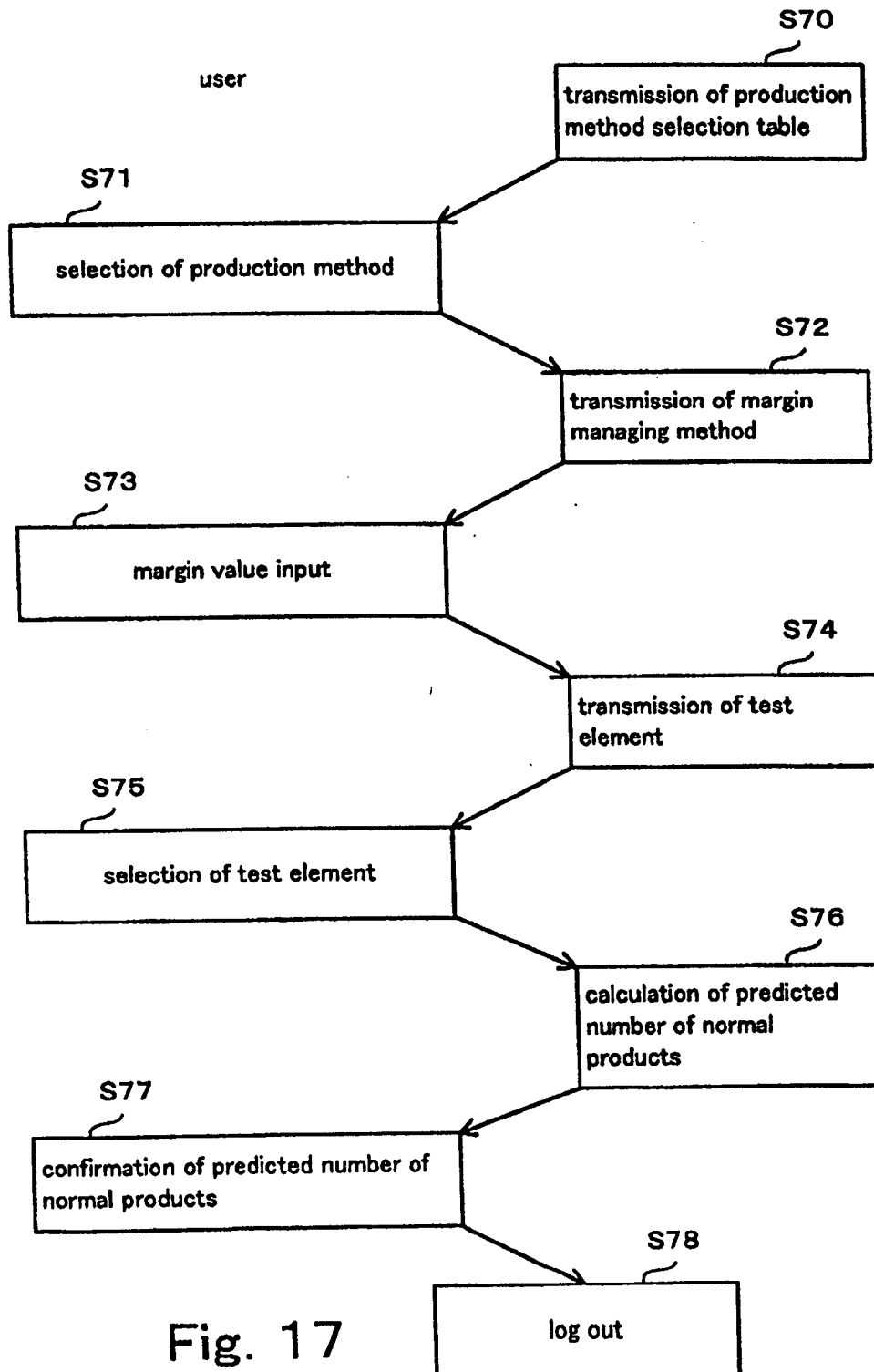


Fig. 17

semiconductor production center C

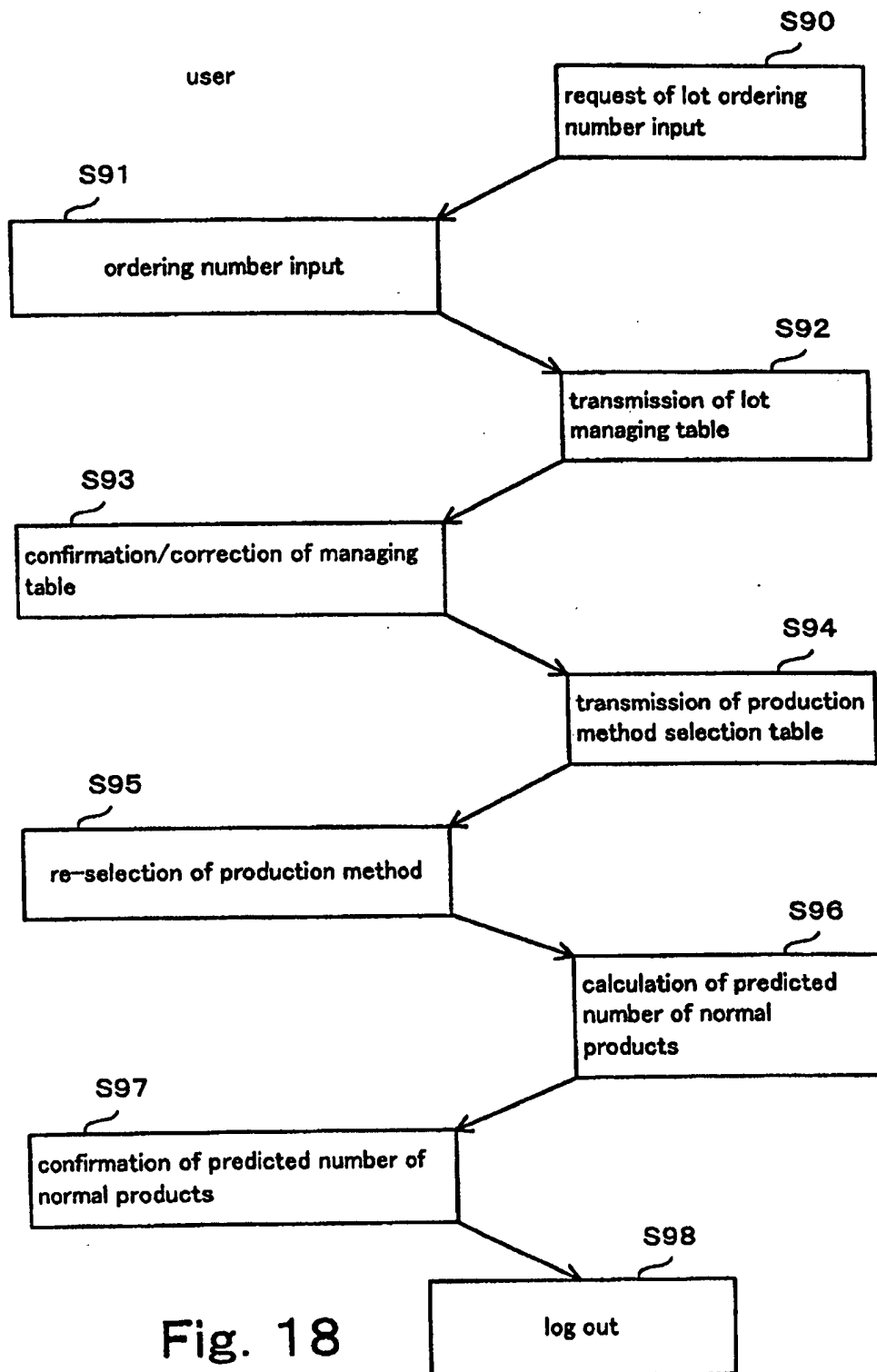


Fig. 18

| | |
|----------|---------|
| user ID | YAMANE |
| password | * * * * |

Fig. 19

| |
|-----------------------|
| new lot input |
| production management |

Fig. 20

| |
|--------------------------------|
| course 1 no division |
| course 2 divide by two |
| course 3 conditional branching |

Fig. 21

| | |
|---|-------------------|
| 1 | 100% continuation |
| 2 | 50% continuation |
| 3 | stoppage |

Fig. 22